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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,682	01/24/2002	Nicholas G. Duffield	003493.00360	9997

7590 09/08/2006

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EXAMINER	
BATURAY, ALICIA	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,682	DUFFIELD ET AL.	
	Examiner	Art Unit	
	Alicia Baturay	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06282006*.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 6 July 2006.

2. Claims 1-38 are pending in this Office Action.

Response to Amendment

3. The terminal disclaimer filed on 6 July 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. 7,080,136 has been reviewed and is accepted. The terminal disclaimer has been recorded. Therefore, the rejection of claims 1-38 under 35 U.S.C. § 101 regarding non-statutory type double patenting is withdrawn.

4. Applicant's amendments and arguments with respect to claims 1-38 filed on 6 July 2006 have been fully considered but they are deemed to be moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 5-9, 20-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCloghrie et al. (U.S. 6,920,112) and further in view of Cen (U.S. 6,738,349).

McCloghrie teaches the invention substantially as claimed including a method and system for collecting aggregate information about network traffic and a packet monitoring system including a sampling element for selecting a fraction of those packets for review, and a queue of selected packets. The packets in the queue are coupled to a packet type detector for detecting packets of a selected type (see Abstract).

7. With respect to claim 1, McCloghrie teaches a method for managing a data network, comprising the steps of:

Receiving an object, where the object is characterized by at least one attribute and where the object comprises at least one data element (McCloghrie, col. 3, lines 6-29); and processing the sample in response to the sampling step (McCloghrie, col. 3, lines 47-52).

McCloghrie does not explicitly teach the use of a probabilistic parameter.

However, Cen teaches determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Cen, col. 4, lines 38-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCloghrie in view of Cen in order to enable the use of a probabilistic parameter. One would be motivated to do so in order to sample a subset of all data packets in the packet flow.

8. With respect to claim 5, McCloghrie teaches the invention described in claim 1, including the method where the processing step comprises:

Aggregating a plurality of samples in accordance with the at least one attribute (McCloghrie, col. 4, lines 2-5).

9. With respect to claim 6, McCloghrie teaches the invention described in claim 1, including the method where the processing step utilizes one of the at least one attribute to determine whether to sample the object (McCloghrie, col. 4, lines 41-49).

10. With respect to claim 7, McCloghrie teaches the invention described in claim 6, including the method where the one of the at least one attribute comprises a size of the object, where the size includes a contribution of the at least one data element (McCloghrie, col. 5, line 20).

11. With respect to claim 8, McCloghrie teaches the invention described in claim 7, including the method where the processing step comprises:

Normalizing the size of the object (McCloghrie, col. 5, lines 21-24).

12. With respect to claim 9, McCloghrie teaches the invention described in claim 6, including the method where the object comprises at least one data element (McCloghrie, col. 3, lines 23-25), where the data element is selected from the group consisting of an octet, an Internet Protocol (IP) packet, a frame relay packet, and an Asynchronous Transfer Mode (ATM) cell (McCloghrie, col. 4, lines 33-36).

13. With respect to claim 20, McCloghrie teaches the invention described in claim 1, including the method further comprising the steps of:

Obtaining at least one sample from the processing step (McCloghrie, col. 3, lines 30-37); and calculating an estimated sampling volume from the determining step (McCloghrie, col. 4, lines 41-49).

14. With respect to claim 21, McCloghrie teaches the invention described in claim 20, including the method further comprising the step of:

Storing the estimated sampling volume (McCloghrie, col. 4, lines 41-49).

15. With respect to claim 22, McCloghrie teaches the invention described in claim 20, including the method further comprising the step of:

Reconfiguring the data network in accordance with the estimated sampling volume (McCloghrie, col. 4, lines 41-49).

16. With respect to claim 23, McCloghrie teaches the invention described in claim 20, including the method further comprising the step of:

Adjusting the probabilistic parameter in order that the measured sampling volume approximates a targeted sampling volume (McCloghrie, col. 4, lines 41-49).

17. With respect to claim 24, McCloghrie teaches the invention described in claim 23, including the method where the adjusting step comprises:

Updating a value of the probabilistic parameter corresponding to a sampling window (McCloghrie, col. 4, lines 41-49).

18. With respect to claim 25, McCloghrie teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter equals a previous value of the probabilistic parameter multiplied by N divided by M, where N equals the measured sampling volume and M equals to the targeted sampling volume and where the previous value corresponds to a previous sampling window (McCloghrie, col. 4, lines 41-49).

19. With respect to claim 26, McCloghrie teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter equals a previous value of the probabilistic parameter multiplied by (N-R) divided by (M-R) if M is greater than N and multiplied by N/M if N is greater than M, where N equals the measured sampling volume, M equals the targeted sampling volume, and R equals the sampling volume for objects having a size greater than the previous value of the probabilistic parameter (McCloghrie, col. 4, lines 41-49).

20. With respect to claim 27, McCloghrie teaches the invention described in claim 24, including the method where a current value of the probabilistic parameter is determined by a set of numbers and a target sampling volume, where each number corresponds to a size of a

sampled object that was sampled in a previous sampling window (McCloghrie, col. 4, lines 41-49).

21. With respect to claim 28, McCloghrie teaches the invention described in claim 24, including the method further comprising the steps of:

Immediately updating a value of the probabilistic parameter when the measured sampling volume is greater than the targeted sampling volume in proportion to a measurement time duration, where the measurement time duration is less than the sampling window (McCloghrie, col. 4, lines 41-49).

22. With respect to claim 29, McCloghrie teaches the invention described in claim 28, including the method further comprising the step of:

Realigning the sampling window in accordance with the step of updating the value of the probabilistic parameter (McCloghrie, col. 4, lines 41-49).

23. With respect to claim 30, McCloghrie teaches the invention described in claim 25, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (McCloghrie, col. 4, lines 41-49).

24. With respect to claim 31, McCloghrie teaches the invention described in claim 26, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (McCloghrie, col. 4, lines 41-49).

25. With respect to claim 32, McCloghrie teaches the invention described in claim 27, including the method further comprising the step of:

Adjusting the measured sampling volume in accordance with a variance of the measured sampling volume (McCloghrie, col. 4, lines 41-49).

26. With respect to claim 33, McCloghrie teaches the invention described in claim 1, including the method where the sampling step utilizes a quasi-random data sampling algorithm (McCloghrie, col. 4, lines 41-49).

27. With respect to claim 34, McCloghrie teaches the invention described in claim 7, including the method where the probabilistic parameter is associated with a probability function that is characterized by a value equal to zero when the size of the object is zero, a linearly increasing value when the size is between zero and the probabilistic parameter, and equal to one when the size is greater than the probabilistic parameter (McCloghrie, col. 4, lines 41-49).

28. With respect to claim 36, McCloghrie teaches the invention described in claim 1, including the method where the probabilistic parameter corresponds to a first color and a

second probabilistic parameter corresponds to a second color, where each color is associated with the at least one attribute (McCloghrie, col. 4, lines 41-49).

29. Claims 2-4, 10, 12, 13, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCloghrie in view of Cen and further in view of Muratani et al. (U.S. 6,119,109).

30. With respect to claim 2, McCloghrie teaches the invention described in claim 1, including a method for managing a data network, comprising the steps of:

Receiving an object, where the object is characterized by at least one attribute and where the object comprises at least one data element (McCloghrie, col. 3, lines 6-29); and processing the sample in response to the sampling step (McCloghrie, col. 3, lines 47-52).

McCloghrie does not explicitly teach the use of a probabilistic parameter.

However, Cen teaches determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Cen, col. 4, lines 38-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCloghrie in view of Cen in order to enable the use of a probabilistic parameter. One would be motivated to do so in order to sample a subset of all data packets in the packet flow.

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the probabilistic parameter is determined from a cost function (Muratani, col. 7, lines 43-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

31. With respect to claim 3, McCloghrie teaches the invention described in claim 2, including a method for managing a data network, comprising the steps of:

Receiving an object, where the object is characterized by at least one attribute and where the object comprises at least one data element (McCloghrie, col. 3, lines 6-29); and processing the sample in response to the sampling step (McCloghrie, col. 3, lines 47-52).

McCloghrie does not explicitly teach the use of a probabilistic parameter.

However, Cen teaches determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Cen, col. 4, lines 38-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCloghrie in view of Cen in order to enable the use of a probabilistic parameter. One would be motivated to do so in order to sample a subset of all data packets in the packet flow.

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the cost function relates a network resource to a quality of measurements (Muratani, col. 27, line 65 – col. 28, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

32. With respect to claim 4, McCloghrie teaches the invention described in claim 3, including the method where the network resource corresponds to a sampling volume and the quality of measurements corresponds to a sampling accuracy (McCloghrie, col. 2, lines 23-34).

33. With respect to claim 10, McCloghrie teaches the invention described in claim 1, including the method further comprising the steps of:

Determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combinataion of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

34. With respect to claim 12, McCloghrie teaches the invention described in claim 10, including the method where determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the charging step utilizes a minimum usage and a usage charge (Muratani, col. 18, lines 19-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

35. With respect to claim 13, McCloghrie teaches the invention described in claim 12, including the method determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the charging step further utilizes a fixed charge (Muratani, col. 18, line 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

36. With respect to claim 35, McCloghrie teaches the invention described in claim 10, including determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the charging function comprises a fixed charge and a usage charge, where the usage charge is determined from a charge per unit of data, a minimum usage, and the measured usage (Muratani, col. 18, lines 23-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

37. Claims 11, 14-19, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCloghrie in view of Cen in view of Muratani and further in view of Smyth et al. (U.S. 6,347,224).

38. With respect to claim 11, McCloghrie teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches the method further comprising the steps of adjusting the measured usage in order to control possible overcharging to the customer (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

39. With respect to claim 14, McCloghrie teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches the method further comprising the step of adjusting the probabilistic parameter in order to achieve a predetermined degree of accuracy of charging the customer, where a sampling volume is related to the probabilistic parameter (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

40. With respect to claim 15, McCloghrie teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches the method further comprising the step of adjusting the probabilistic parameter in order to reduce unbillable usage within a predetermined percentage of the measured usage, where a sampling volume is related to the probabilistic parameter (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

41. With respect to claim 16, McCloghrie teaches the invention described in claim 10, including the method further comprising the step of:

Determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches the method further comprising the step of adjusting the billing period in order to control a degree of accuracy for charging the customer (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

42. With respect to claim 17, McCloghrie teaches the invention described in claim 14, including determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches including the method where the probabilistic parameter is adjusted (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in

order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

43. With respect to claim 18, McCloghrie teaches the invention described in claim 15, including determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches including the method where the probabilistic parameter is adjusted (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in

order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

44. With respect to claim 19, McCloghrie teaches the invention described in claim 16, including determining a measured usage of the data network in accordance with the at least one attribute (McCloghrie, col. 7, lines 47-50).

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method further comprising the steps of charging a customer for the measured usage in accordance with a charging function, where the customer is associated with the at least one attribute and where the customer is presented a bill for a billing period and where a charging accuracy is related to the charging function and an accuracy of the measured usage (Muratani, col. 7, lines 43-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches including the method where the probabilistic parameter is adjusted (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in

order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

45. With respect to claim 37, McCloghrie teaches a method for charging a customer for a usage of a data network, comprising the steps of:

Receiving an object, where the object is characterized by a size and a customer (McCloghrie, col. 5, line 20); normalizing the sample in response to the sampling step (McCloghrie, col. 5, lines 21-24); determining the usage for the customer in accordance with step the normalizing step (McCloghrie, col. 5, lines 21-24); and relates the probabilistic parameter to a sampling accuracy and a sampling volume (McCloghrie, col. 2, lines 23-34).

McCloghrie does not explicitly teach the use of a probabilistic parameter.

However, Cen teaches determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Cen, col. 4, lines 38-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCloghrie in view of Cen in order to enable the use of a probabilistic parameter. One would be motivated to do so in order to sample a subset of all data packets in the packet flow.

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method where the probabilistic parameter approximately optimizes a cost function (Muratani, col. 7, lines 43-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches adjusting a probabilistic parameter in accordance with a charging accuracy and adjusting the usage in accordance with the charging accuracy; and determining a charge to the customer in response to the adjusting step (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

46. With respect to claim 38, McCloghrie teaches a method for managing a data network in accordance with a traffic volume, comprising the steps of:

Receiving an object, where the object is characterized by a size (McCloghrie, col. 5, line 20); normalizing the sample in response to the sampling step (McCloghrie, col. 5, lines 21-24); determining an estimated traffic volume in accordance with the normalizing step (McCloghrie, col. 4, lines 41-49); and utilizing the estimated traffic volume to manage the data network (McCloghrie, col. 5, lines 46-54).

McCloghrie does not explicitly teach the use of a probabilistic parameter.

However, Cen teaches determining whether to sample the object in accordance with a probabilistic parameter; sampling the object in response to the determining step (Cen, col. 4, lines 38-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify McCloghrie in view of Cen in order to enable the use of a probabilistic parameter. One would be motivated to do so in order to sample a subset of all data packets in the packet flow.

The combination of McCloghrie and Cen does not explicitly teach the use of a cost function.

However, Muratani teaches the method of where the probabilistic parameter approximately optimizes a cost function, where the cost function relates the probabilistic parameter to a sampling accuracy and a sampling volume (Muratani, col. 7, lines 43-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie and Cen in view of Muratani in order to enable the use of a cost function. One would be motivated to do so in order to enable a billing system for billing a user accurate charges (fees) when information is utilized.

The combination of McCloghrie, Cen and Muratani does not explicitly teach adjusting a probabilistic parameter in accordance with a charging accuracy.

However, Smyth teaches adjusting a probabilistic parameter for a sampling window in accordance with a targeted sampling volume (Smyth, col. 11, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of McCloghrie, Cen and Muratani in view of Smyth in order to adjusting a probabilistic parameter in accordance with a charging accuracy. One would be motivated to do so in order to provide an indicator of relative cost to the user.

Response to Arguments

47. Applicant's arguments filed 6 July 2006 have been fully considered, but they are not persuasive for the reasons set forth below.

48. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at Mon-Thu, 7:30 am - 5:00 pm, 2nd Fri - 7:30 - 4:00, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Alicia Baturay
August 31, 2006

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER